

What is Claimed is:

1. A method for recording and confirming a transaction, the method comprising:
5 at a portable device, storing speech data comprising a spoken
command;
performing speech recognition on the speech data;
subsequently, in response to an output of the speech recognition:
recording a transaction corresponding to the spoken command
at a database in a computer system remote from the portable device;
10 and,
transmitting control information and descriptive data
corresponding to the transaction to the portable device; and,
at a time, or location, or combination of time and location determined
by the control information, producing sound determined by the descriptive
15 data at the portable device.
2. A method according to claim 1 wherein the descriptive data comprises
digitized speech data.
- 20 3. A method according to claim 1 or 2 wherein performing speech recognition on
the speech data is done at the computer system remote from the portable
device.
- 25 4. A method according to any one of claims 1 2 or 3 comprising, after
transmitting the control information and descriptive data automatically
detecting that the portable device is in proximity to one or more other devices
and producing the sound in response to the portable device detecting that it is
in proximity to a specific other device.
- 30 5. A method according to claim 4 wherein automatically detecting that the
portable device is in proximity to one or more other devices comprises
performing an inquiry by way of a wireless communication protocol.
- 35 6. A method according to any one of claims 1 to 5 where the portable device is in
sporadic wireless communication with the computer system.

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7. A method according to any one of claims 1 to 6 comprising automatically detecting that the portable device is in proximity to one or more other devices at a time of receiving the speech data at the portable device wherein recording the transaction comprises recording a list of the one or more other devices in the database.
8. A method according to any one of claims 1 to 7 wherein the speech data consists of a single utterance.
9. A method according to claim 8 wherein the single utterance comprises a first part specifying one of a plurality of functions and a second part and the method comprises parsing a second part of the single utterance according to a syntax corresponding to the one of the plurality of functions specified by the first part of the single utterance.
10. A method according to claim 9 wherein the plurality of functions include at least a calendar function and a reminder function.
11. A method for controlling a function provided at least in part by way of a portable electronic device, the method comprising:
at a portable device obtaining speech data by receiving and digitizing a spoken command the command comprising a request to generate an event at the portable device;
transferring the speech data to a computer system;
at the computer system, performing speech recognition on the speech data; based upon a result of the speech recognition, identifying at least a desired trigger for an event; and, generating control data corresponding to the desired trigger;
transferring the control data from the computer system to the portable device; and,
on the occurrence of a trigger specified by the control data, providing an audible signal by way of a speaker of the portable device.
12. A method according to claim 11 wherein transferring the speech data to the computer system and transferring the control data to the portable device are performed by way of a wireless communication channel.

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13. A method according to claim 11 or 12 wherein the trigger for the event is a time and the method comprises providing the audible signal at the time.
- 5 14. A method according to any one of claims 11 to 13 wherein the audible signal comprises digitized speech.
- 15 15. A method according to claim 14 wherein the digitized speech comprises at least a portion of the digitized spoken command.
- 10 16. A method according to claim 14 comprising generating synthesized speech at the computer system in response to a result of the speech recognition wherein at least a part of the digitized speech comprises the synthesized speech.
- 15 17. A method according to claim 16 comprising selecting one of a plurality of voices for the synthesized speech based upon a result of the speech recognition.
- 20 18. A method according to claim 17 comprising identifying one of a plurality of functions based upon a result of the speech recognition wherein selecting one of a plurality of voices is based upon the identified function.
- 25 19. A method according to any one of claims 11 to 18 wherein the spoken command comprises a request to make a calendar entry and the method comprises generating calendar data at the computer system from the speech data and entering the calendar data into calendar information maintained by a calendar application.
- 30 20. A method according to claim 19 comprising synchronizing calendar information maintained by a calendar application on the portable device with the calendar information on the computer system.
- 35 21. A method according to claim 11 wherein the event comprises a meeting with a contact, the spoken command identifies the contact and the method comprises matching a portion of the digitized speech to a name of the contact in a list of contacts which includes the contact.

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22. A method according to any one of claims 11 to 21 comprising, at the portable device, automatically detecting one or more other devices that are proximate to the portable device, associating a list of the one or more other devices with the speech data, and transmitting the list of the one or more other devices to the computer system.
23. A method according to claim 22 comprising, at the computer system, storing the list of one or more devices in a database that can be searched for the one or more devices and maintaining an association between the list of one or more devices and information derived from the speech data.
24. A method according to claim 22 wherein the one or more other devices include one or more devices having fixed locations.
25. A method according to claim 22 wherein the one or more other devices include one or more portable devices.
26. A method according to claim 25 wherein the one or more portable devices are each associated with a contact in a list of contacts maintained in the computer system.
27. A method according to any one of claims 11 to 27 comprising, at the computer system, identifying one of a plurality of functions based upon a result of the speech recognition and parsing the result of the speech recognition according to a rule selected on the basis of the identified function.
28. A method according to claim 27 wherein identifying the one of the plurality of functions comprises recognizing a keyword in the speech data.
29. A method according to claim 28 wherein the keyword occurs at a beginning of the speech data.
30. A method according to any one of claims 27 to 29 wherein the plurality of functions includes at least a calendar function and a reminder function.
31. A method for automatically associating context information with an event, the method comprising:

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at a portable device comprising a wireless data transceiver, recording an event;

in response to recording the event, saving a list of other devices detected by way of the wireless data transceiver and associating the list with the recorded event.

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32. A method according to claim 31 comprising uploading the recorded event and the saved list to a computer system.
- 10 33. A method according to claim 32 comprising, at the computer system, storing the recorded event and the saved list in a data store and maintaining an association between the recorded event and the saved list.
- 15 34. A method according to claim 33 comprising conducting a search for the recorded event in the data store based at least in part on information in the stored list.
- 20 35. A method according to any one of claims 31 to 34 wherein the event comprises the recording of a voice memo.
36. A method according to any one of claims 31 to 34 wherein the event comprises the creation of an appointment.
- 25 37. A method according to any one of claims 31 to 34 wherein the event comprises recording a new contact.
38. A method according to any one of claims 31 to 34 wherein the recorded event comprises the creation of a proximity-based reminder.
- 30 39. A method according to any one of claims 31 to 34 wherein the recorded event comprises receiving an acknowledgment from a user of a signal generated by the portable device.
- 35 40. A method according to claim 39 comprising generating the signal at the portable device in response to detecting the proximity of another device.
41. A method according to any one of claims 35 to 38 wherein the recorded event comprises digitized speech data.

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42. A method according to any one of claims 31 to 41 wherein the list comprises names of one or more people.
- 5 43. A method according to any one of claims 31 to 42 wherein the list comprises information identifying a fixed physical location.
44. A method according to any one of claims 31 to 43 wherein the list comprises digitized sound data received from one or more of the other devices.
- 10 45. A method according to claim 44 wherein the digitized sound data comprises a spoken name of a person.
46. A method for maintaining calendar data in a computer based calendar, the method comprising:
at a portable device comprising:
15 a microphone;
 a digitizer coupled to receive and digitize speech signals captured by the microphone; and,
 a speaker;
 receiving and digitizing a spoken command, the command comprising
20 a request to add data to a computer-based calendar;
 performing speech recognition on the spoken command;
 based upon a result of the speech recognition, identifying at least a time for an event and entering the time for the event as calendar data in a computer
calendar; and,
25 at the time for the event providing an audible signal by way of the speaker of the portable device.
47. A method according to claim 46 wherein the audible signal comprises digitized speech.
- 30 48. A method according to claim 47 wherein the digitized speech comprises at least a portion of the digitized spoken command captured by the microphone.
- 35 49. A method according to claim 46 comprising, after receiving and digitizing the spoken command, transferring the digitized spoken command from the portable device to a computer, wherein performing the speech recognition and

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entering the time for the event as calendar data in a computer calendar are performed at the computer.

50. A method according to claim 49 wherein transferring the digitized spoken command from the portable device to the computer is performed by way of a wireless data link.
51. A method according to claim 47 comprising, after receiving and digitizing the spoken command, transferring the digitized spoken command from the portable device to a computer, wherein performing the speech recognition and entering the time for the event as calendar data in a computer calendar are performed at the computer.
52. A method according to claim 46 comprising generating at least a part of the digitized speech by performing speech synthesis at the computer and transferring the digitized speech from the computer to the portable device.
53. A method according to claim 52 wherein transferring the digitized speech from the computer to the portable device is performed by way of a wireless data link.
54. A method according to claim 53 wherein transferring the digitized spoken command from the portable device to the computer is performed by way of the wireless data link.
55. A method according to claim 46 wherein the event comprises a meeting with a contact, the spoken command identifies the contact and the method comprises matching a portion of the digitized speech to contacts in a list of contacts which includes the contact.
56. One or more media carrying computer-readable instructions which, when executed by data processors in a portable device and a computer system cause the portable device and computer system to perform a method according to any one of claims 1 to 30, 32 to 45, or 49-54.

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57. One or more media carrying computer-readable instructions which, when executed by a data processor in a portable device cause the portable device to perform a method according to any one of claims 31, 35-48 or 55.
- 5 58. A portable device for use in managing personal information, the portable device comprising:
- a sound recording mechanism for recording and digitizing sound and recording digitized sound as speech data in a data store in the portable device;
 - 10 a sound playback mechanism for playing back speech data from the data store;
 - a wireless mechanism for transmitting and receiving data; and a processor configured to execute instructions in the data store which cause the processor to:
 - 15 upon receiving a user command input, operate the sound recording mechanism to record speech data in the data store;
 - subsequently transmit the speech data to a computer system by way of the wireless mechanism;
 - subsequently receive from the computer system and store in the data store control information specifying a trigger event and digitized sound data;
 - 20 and,
 - upon occurrence of the trigger event playing the digitized sound data by way of the sound playback mechanism.
- 25 59. A portable device according to claim 58 wherein the instructions cause the processor to associate with the speech data and store a first list of other devices detected by way of the wireless mechanism at a time of recording the speech data.
- 30 60. A portable device according to claim 59 wherein the wireless mechanism has a range not exceeding 12 meters.
61. A portable device according to claim 59 or 60 where the instructions cause the first list to be transmitted to the computer system with the speech data.
- 35 62. A portable device according to any one of claims 58 to 61 wherein the instructions cause the processor to store a second list of other devices detected

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by way of the wireless mechanism at a time of playing the digitized sound data.

- 5 63. A portable device according to claim 62 wherein the instructions cause the processor to transmit the second list of other devices to the computer system.
- 10 64. A portable device according to any one of claims 58 to 63 wherein the portable device comprises a stored digital audio data and is configured to transmit the stored digital audio data to other devices in response to service discovery requests from the other devices.
- 15 65. A portable device according to claim 64 wherein the stored digital audio data comprises a spoken name of a user of the portable device.
- 20 66. A portable device according to any one of claims 58 to 65 wherein the instructions cause the processor to transmit service discovery requests to other nearby devices and to maintain a set of received digital audio data received in response to the service discovery requests.
- 25 67. A portable device according to claim 66 configured to play the set of received digital audio data by way of the sound playback mechanism in response to a user command input.
- 30 68. A system comprising a portable device according to any one of claims 58 to 67 and a computer system, the computer system comprising:
a wireless mechanism for transmitting data to and receiving data from the portable device;
a speech recognition facility configured to automatically process speech data received from the portable device;
an application operative to produce control information specifying a trigger event based on output from the speech recognition facility and to automatically transmit the control information to the portable device.
- 35 69. A system according to claim 68 wherein the computer system comprises a speech synthesis facility wherein the application is configured to cause the speech synthesis facility to generate synthesized speech associated with the

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control information and to automatically transmit the synthesized speech to the portable device.

- 5 70. A system according to claim 68 wherein the computer system is configured to receive from the portable device a list of other devices, the list associated with the speech data;
create and store a record corresponding to the speech data; and,
store the list in association with the record.
- 10 71. A system according to any one of claims 68 to 70 wherein the computer system comprises a plurality of applications and a mechanism for directing the output from the speech recognition facility to a selected one of the applications on the basis of a voice command detected by the speech recognition facility.
- 15 72. A system according to claim 71 wherein the plurality of applications include a calendar application.
73. A system according to claim 71 wherein the plurality of applications include a reminder application.
- 20 74. Apparatus for controlling a function provided at least in part by way of a portable electronic device, the apparatus comprising:
a portable device comprising:
means for obtaining speech data by receiving and digitizing a spoken
25 command the command comprising a request to generate an event at the portable device;
means for transferring the speech data to a computer system; and
means for providing an audible signal on the occurrence of a trigger specified by control data; and,
30 a computer system comprising:
means for performing speech recognition on the speech data;
means for identifying at least a desired trigger for an event based upon a result of the speech recognition;
means for generating control data corresponding to the desired trigger;
35 and,
means for transferring the control data from the computer system to the portable device.

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75. Apparatus according to claim 74 wherein the means for transferring the speech data to the computer system and the means for transferring the control data to the portable device comprise a wireless communication channel.
- 5 76. Apparatus according to claim 74 or 75 wherein the portable device comprises a clock and a means for comparing a current time to a time specified by the control data.
- 10 77. Apparatus according to any one of claims 74 to 76 wherein the computer system comprises a speech synthesizer.
- 15 78. Apparatus according to claim 77 wherein the speech synthesizer comprises a plurality of synthesized voices and the computer system comprises a means for selecting one of the plurality of synthesized voices based upon a result of the speech recognition.
- 20 79. Apparatus according to any one of claims 74 to 78 wherein the computer system comprises means for identifying one of a plurality of functions based upon an output of the means for speech recognition.
- 25 80. Apparatus according to claim 78 wherein the computer system comprises means for identifying one of a plurality of functions based upon an output of the means for speech recognition and means for selecting one of the plurality of voices based upon the identified function.
- 30 81. Apparatus according to any one of claims 74 to 80 wherein the computer system comprises a calendar facility.
- 35 82. Apparatus according to any one of claims 74 to 81 wherein the portable device comprises means for automatically detecting one or more other devices that are proximate to the portable device and means for associating a list of the one or more other devices with the speech data.
83. Apparatus according to claim 82 wherein the computer system comprises:
a database comprising records of one or more events associated with speech data and corresponding lists of other devices; and,

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means for searching the database for records at least in part according to the corresponding lists of other devices.

5 84. Apparatus according to claim 83 comprising a plurality of other devices each having a fixed location.

85. Apparatus according to any one of claims 74 to 84 wherein the computer system comprises:
10 means for identifying one of a plurality of functions based upon a output from the means for speech recognition; and,
means for parsing the output of the means for speech recognition according to a rule selected on the basis of the identified function.

15 86. Apparatus according to claim 85 wherein the means for identifying the one of the plurality of functions comprises means for recognizing a keyword in the speech data.

20 87. Apparatus according to claim 86 wherein the means for recognizing a keyword comprises means for identifying a keyword occurring at a beginning of the speech data.

88. Apparatus for automatically associating context information with an event, the apparatus comprising:
25 portable device comprising a wireless data transceiver and means for recording an event;
means for saving a list of other devices detected by way of the wireless data transceiver in response to recording the event; and means for associating the list with the recorded event.

30 89. Apparatus according to claim 88 comprising means for uploading the recorded event and the saved list to a computer system.

35 90. Apparatus according to claim 89 comprising a computer system, the computer system comprising means for storing the recorded event and the saved list in a data store and maintaining an association between the recorded event and the saved list.

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91. Apparatus according to claim 90 wherein the computer system comprises means for conducting a search for the recorded event in the data store based at least in part on information in the stored list.
- 5 92. Apparatus according to any one of claims 88 to 91 wherein the portable device comprises means for digitally recording sound.
93. Apparatus for maintaining calendar data in a computer based calendar, the apparatus comprising:
- 10 a portable device comprising: a microphone; a digitizer coupled to receive and digitize speech signals captured by the microphone; and, a speaker;
- means for performing speech recognition on a spoken command digitized by the digitizer, the spoken command comprising a request to add data to a computer-based calendar;
- 15 means for identifying at least a time for an event based upon an output from the means for performing speech recognition;
- means for entering the time for the event as calendar data in a computer calendar; and,
- 20 means for providing an audible signal by way of the speaker of the portable device at the time for the event.
94. Apparatus according to claim 93 wherein the audible signal comprises digitized speech.
- 25 95. Apparatus according to claim 94 wherein the digitized speech comprises at least a portion of the digitized spoken command captured by the microphone.
96. Apparatus according to any one of claims 93 to 96 wherein the means for performing speech recognition is located at a computer system outside of the portable device.
- 30 97. Apparatus according to claim 96 wherein the computer system comprises a calendar database and the means for entering the time for the event is configured to store the time for the event in the calendar database.
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98. Apparatus according to any one of claims 96 to 97 comprising a wireless data link linking the portable device and the computer.
- 5 99. Apparatus according to claim 94 comprising a computer system outside of the portable device wherein the computer system comprises a speech synthesizer connected to generate at least some of the digitized speech.
- 10 100. Apparatus comprising any new inventive feature, combination of features, or subcombination of features described herein.
101. Methods comprising any new and inventive step, act, combination of steps and/or acts or subcombination of steps and/or acts described herein.